

JPC RURAL MARKET STUDY

- A. In order to obtain a full picture of the pattern and trends of steel consumption in rural India, an all India survey was commissioned by the Ministry of Steel, Government of India. The study is now complete and its report has been accepted by the Ministry of Steel.
- B. The survey was coordinated by Joint Plant Committee (JPC), Kolkata and the field work spread over 297 Districts, 1499 Villages, 22,624 Households, 4361 Manufacturers and 7859 Retailers in the rural market was carried out by IMRB International Ltd.
- C. Objective: To assess trends in consumption pattern of different items of steel in the Indian rural market, by examining both a) the demand side i.e. Household and Community/Institutional Uses; and b) the supply side i.e. Manufacturers, Retailers. Additionally, the Study examined the potential for increasing the level of steel consumption in rural market in the future, the nature of shifts in application of steel and the extent of threat of substitution to steel from competing materials.
- D. Assessment period of the Study : 2011-12, 2016-17 and 2019-2020
- E. A Technical Committee, was constituted under the chairmanship of Joint Secretary to Government of India and Chairman, JPC and including representatives of leading steel producers and industry associations as its Members, to monitor and guide the study.
- F. Major Findings:
- During the period 2007-2009, average annual rural per capita finished steel consumption is estimated to be 9.78 kg and at an absolute level, rural steel consumption is estimated at 7.9 million tonnes.
 - In per capita terms, steel consumption was highest for household related construction at 5.8 kg (59%) followed by household items at 1.57 kg (16%), vehicles at 1.4 kg (14%), items for professional use at 0.5 Kg (5%), furniture at 0.25 kg (3%) and construction of common village infrastructure/facilities at 0.26 kg (3%).
 - During 2007-09, carbon steel long products consumption is estimated at 4.844 million tonnes and that of carbon steel flat products at 2.77 million tonnes while stainless steel consumption is estimated at 0.274 million tonnes.
 - Excluding the North-Eastern states, Kerala with per capita consumption of 18.6 kg is the largest consuming state.
 - By 2020, rural per capita consumption of finished steel is estimated at 12.11 kg – 14 kg based on alternate economic growth scenarios.

G. Recommendations

An increase in the rural GDP would lead to increase in the consumption of steel. Apart from this, certain other measures would also help in increasing steel consumption in rural India. These are discussed below:

1. Shift in Type of Housing Structure

- a) Currently a significant proportion of houses constructed in rural India are non-frame (or load bearing wall structures), which use less amount of steel when compared to frame structures.
- b) Frame structures offer various advantages over their load-bearing counterparts. For e.g., it is easier to construct and suitable modifications, if required, can be made at a later stage. This advantage is not available in case of load bearing structures.
- c) While greater contact with urban areas, which largely employ frame-structures now-a-days, would also increase their usage in rural areas, a pro-active campaign to highlight the advantages of such structures in rural areas would go a long way towards increasing steel consumption in rural India. As has been seen, construction activities form the bulk of steel consumption in rural India, any increase in steel consumption in this arena would affect overall steel consumption drastically.
- d) Further, constructions made of tubular steel structures, pre-engineered buildings may be popularized. Facilities would need to be created to spur the growth of such structures in rural India.

2. Re-looking Steel Design for Various Applications

- a) Steel is largely associated with strength & durability. Traditionally wherever steel has been used it has been used with an over-designed thickness. This may not be required actually. For example, current steel usage in many current applications, such as roofing sheets, utensils etc., makes use of steel of a certain thickness. However, given the strength of steel, a re-look in these design aspects may be required such as reducing the thickness of steel while maintaining the same properties such as strength required for a particular application.
- b) Reducing the thickness of steel used in these applications would have a dual effect of reducing weight and hence its price. Weight reduction, with same strength, and reduced price would lead to the adoption of steel product at a scale larger than what it is currently.
- c) For example, housing sheets and utensils may not require the thickness which is currently being employed to be useful in their respective applications. An in-depth research and development needs to be initiated to address these avenues.
- d) Apart from this, there would be a need to educate the rural populace regarding the strength and durability of steel items even after their thickness is reduced. A promotional campaign on this aspect may be thought of and designed.

3. Investment in Community Structures

- a) Village infrastructure such as schools, clinics, hospitals, irrigation projects, bridges etc. contribute to a small extent to per-capita consumption. However, these projects specify usage of certain construction technologies and these tend to percolate down to usage in households too.

- b) Also, the unskilled and semi-skilled labour for such projects is from the villages itself and acquaintance with newer technology being used in these projects can lead to a multiplier effect leading to increased consumption of steel.
- c) Government of India and various state governments should increase their spending in such rural infrastructure schemes and act as facilitator which will have the two-fold effect of development of rural areas as well as an increase in the consumption of steel at rural level.

4. Small & Medium Scale Steel Products Manufacturing

- a) Efforts may be made to encourage small and medium scale steel manufacturing in India. Manufacture of household items such as utensils and furniture etc. in the village (or its proximity) itself would lead to reduction in prices and hence would lead to greater acceptability. Entrepreneurs at village levels may be encouraged to take up businesses by providing them easy credit through schemes like microfinance and improving village infrastructure.
- b) For the fulfillment of above purpose, two specific interventions would be required. Firstly, adequate training would have to be imparted to the rural populace for working with steel. This is because the work-force for such manufacturing would be derived largely from the rural areas itself. Secondly, proper machinery for steel working should be developed and made available in rural areas at affordable costs to encourage such enterprises. A research & development initiative would have to be taken for the same. For e.g. machines like welding and cutting equipment may be made available at rural markets for maintenance and refurbishing of steel products purchased by rural populace.
- c) This step would have multi-fold effect of reducing dependence on agriculture, stemming rural-to-urban migration, rise in rural prosperity and increased consumption of steel in rural India.

5. Highlighting Advantages of Steel

- a) One of the major advantages of steel which makes it unique is its strength and durability. This advantage should be highlighted upon while promoting steel vis-à-vis other competing raw materials, especially against those where steel is losing out. E.g. plastics.
- b) For e.g. an increasing shift towards plastics is being seen in many cases such as household items (storage trunks and bins), furniture (chairs, tables, stools) etc. This is largely due to the lower price of these items when made from plastic as compared to when they are made to steel. However, while these items are cheaper they do not offer the strength and longevity of steel. The key here would be to reduce steel prices in such a way that it is able to stem the plastic tide to a certain extent. This can again be done by addressing design as well as logistics & supply-chain issues as discussed above.
- c) At a higher level, the environmental degrading nature of plastic products can be highlighted. Steel products are renewable (steel can be used again) and do not cause harm to environment. There is a greater need to move towards environmental friendly products in these times of pollution, rising carbon emission levels and global warming. But for such a promotion to be successful, the advantages such as strength, durability and

environmental friendliness of steel must be linked with an optimum price which would make it competitive vis-à-vis other raw materials, especially plastic.

6. Increasing Aesthetics of Steel

- a) Aesthetics is one of the major advantages a product can exercise over its competitors. Though steel is also considered aesthetic, it may lose out when compared with other products like wood (for furniture) or plastic (for household goods).
- b) Special attention may be paid to the aesthetics of steel used in various products. Colour coated GP/GC sheets may be popularized in rural areas to increase consumption.

7. Improving Logistics & Supply-Chain for Steel

- a) It has been seen that a major hindrance in the adoption of steel is related to its supply to rural areas. Manufacturers of steel items such as utensils, furniture and construction hardware have mentioned issues regarding supply of steel as raw material. Even retailers catering to rural market have raised this issue.
- b) Steel producers would need to strengthen the supply-chain for steel items in rural areas. As pointed out, it has been seen that supply of construction materials is a constraint to greater steel consumption in hilly and remote areas.
- c) Smaller lot sizes of finished steel to manufacturers such as those of utensils, furniture and construction hardware may be considered as most of the manufacturers would be of small or medium scale and would mainly require raw materials in small lot sizes.

8. Addressing Steel Quality Issues

- a) Some of the manufacturers and retailers mentioned that in certain cases issues were faced regarding the quality of steel. As per them, this leads to reduction in demand of steel items and shift to other raw materials. Some issues were also faced regarding rusting, especially during the rainy season.
 - b) These issues of quality and rusting need to be addressed in order to remove any negative association of steel in minds of the rural populace. Rust free steel through process like galvanization must be popularized. There must be a standardization of steel to be used in various types of product categories.
 - c) While steel has a durable nature and is long lasting, it also has a good scrap value. A mechanism for steel recycling (including collection) would also propel the rural populace to buy more steel items as they would be able to realize a resale value after its usage over years. Currently, much steel in rural India would be largely going waste after usage.
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